PUBLIC NECESSARIES.

Mr. Editor,—The public is greatly indebted to you, for advocating the great necessity of erecting watering places and closets in the various thoroughfares.

Your contemporaries seem to labour under a false delicacy, in keeping themselves aloof from the consideration of the question. It must, however, be sooner or later carried into effect by the legislature or parochial authorities. Praise, through the medium of the press, is due to Lord Lincoln, late chief Commissioner of Woods, for causing to be erected, at Hyde Park Corner, the most convenient and spacious watering-place within the precincts of the metropolis.

With reference to the instructions from the Incorporated Church Building Society, which appeared in The Builder, they seem to have lost sight of one which is essential to the comfort and convenience of the congregation, and that is,—a water-closet.—I am, Sir, &c.,

A Friend to Public Convenience.

Kensington, May 19th, 1846.

INSTITUTION OF CIVIL ENGINEERS.

May 12th and 19th. Sir John Rennie, President, in the chair.—The first of these evenings was entirely occupied by the renewed discussion upon Mr. Williams's "Description of the new works for rendering navigable the upper part of the river Severn." The theory of the oblique weirs was strongly contested, on the ground that, although by its obliquity the obstruction to the stream was more gradual, yet that the vertical obstruction must exist to the extent of the cubic content of the object placed in a channel of given dimensions. After much discussion, in which it was argued that the real position assumed by Mr. Cubitt, in his design for these weirs, had not been perfectly seized by the members, it was shewn that the intention of the works was, to place such weirs in the river as should at all times retain a depth of water sufficient for the navigation, even in the shoalest spots, but that such weirs should be so constructed as to permit of the free passage of the water, without raising it higher in times of freshes or floods than it had been raised in times of similar floods before the construction of such weirs. This it was satisfactorily shewn had been done by the oblique weirs, and that the navigation by means of the lateral locks enabled a certainty of transport of merchandise to be attained which could not previously be thought of; and at the same time, the drainage of the country had not been at all deteriorated by the regular medium height of the water in the river.

The paper read was "On the combustion of fuel under steam boilers, with a description of Bodmer's fire-grate," by J. G. Bodmer. This paper, after drawing attention to the importance of ensuring a more perfect combustion of the fuel used in furnaces than has hitherto been attained by the ordinary methods, proceeded to give a description of the new fire-grate, by which the author arrived at the desired object.

The main feature of this grate consisted in the ends of the fire-bars being laid in the threads of two parallel endless screws, placed longitudinally beside the fire space, and revolving slowly, so as to move the grate bars gradually forward; the fresh fuel being thus received on a bare surface, and consecutively moved towards that portion, in a state of ignition, a more perfect and effective combustion of the fuel and the gases was stated to take place, than could be obtained by the ordinary method of throwing the fresh fuel on an ignited surface; for in the latter case the gases suddenly developed passed off to a considerable extent through the flues as smoke without being ignited, and a considerable waste of fuel was the consequence, which it was the principal object of this grate to avoid. The fire-bars, on arriving at the further end of the machine, descended on to another parallel pair of endless screws, which had a contrary motion to the upper pair, and thus restored the bars to the front of the grate, where they were again lifted up to the upper screws by means of levers, and were in a position to receive fresh coals, and again to be moved onwards into the fire; a rocking motion was communicated to them by a drunken thread, so as to prevent the spaces from filling with clinkers.

The paper then proceeded to notice the applicability of this grate to all situations in which furnaces were required, and concluded by contending, that with the more perfect combustion that would be insured, a less draught, and, consequently, less fuel would be required, which, it was maintained, was an object of great interest, when it was considered that millions of tons of coal were annually consumed in this country, and that with a daily increasing consumption, the time might ere long arrive when any means by which even a small saving of fuel might be effected would be looked upon as a matter of paramount importance.

Sir John Rennie, president, announced that the first of the series of his soirées would be held June 13th, and that it was his intention this season to repeat them on the evenings of Saturday, June 20th and 27th, and July 4th. The members were requested to co-operate in procuring interesting models and works of art for these interesting meetings.

ILLEGALITY OF VIOLENT EJECTMENTS.

Perry v. Fitzhowe.

A new and interesting point was decided in this case, on Thurday, the 14th instant, by the Court of Queen's Bench. The action was brought for trespass, in breaking and entering the plaintiff's house, and pulling it down; the plaintiff himself and his family being actually in the house at the time. The defendant pleaded his right to pull down the house. Several collateral matters of no consequence were pleaded on both sides; but the real question was, whether, admitting that a party is authorized by law in the other circumstances of any particular case, to demolish a house, he can justify such demolition where the house is in the actual present personal occupation of the owner and his family. Lord Denman, in giving judgment, said the presence of the plaintiff and his family in the house at the time of the demolition, rendered this case different from any which had ever been brought before the court, and there was no express authority upon the point. There was, however, no difficulty in deciding it, by analogy to well-known cases, and to provisions which were already clearly and fully established. It has been long settled, that a horse could not be distrained whilst a man was riding him, and that instruments or tools could not be seized whilst they were in actual use and possession of the owner; and the general ground of these and all such decisions was the imminent danger of a breach of the peace, resulting from seizing the articles in such circumstances. But surely a breach of the peace was much more likely to result from throwing down a house whilst the inhabitants were in it; and it was further evident that such demolition was necessarily dangerous to personal security, and even to human life. The law would not allow any man to assert his rights, or pursue his remedy, at so great a risk of producing such important injuries to the public peace, or the safety of individuals. The court was therefore of opinion, that the justification which the defendant had set up was wholly insufficient, and that the judgment must be given for the plaintiff.—*Times.*

VENTILATION.

The select committee, as to Houses of Parliament, have recommended that further inquiries and experiments should be made, under the direction of the Office of Works, before any plan hitherto proposed be adopted.

At the Central Criminal Court, on the 18th of May, just as the court was about to break up, one of the jury addressed the recorder, and called his attention to the effect of the present plan of ventilating the court by Dr. Reid. He said that the jury had suffered most severely from the currents of cold air that were thrown into their box, and one or two of them had taken severe colds, and all had been very much inconvenienced.

The recorder said he agreed with the jury, that the system was very unsatisfactory. When he sat in the court for any time, he had found his legs and feet completely benumbed, and hardly a session passed without his taking a severe cold. It really seemed as though the worst system of ventilation was adopted at the greatest expense.

New Books.

The History and Description of the Great Western Railway, including its Geology, and the Antiquities of the District; with numerous Views. By John C. Bourne. Bogue, Fleet-street, 1846.

The Great Western Railway is a work, of which a country may justly be proud, whether regarded by itself or in connection with its results, and is an enduring monument of modern power, and the tendency of the age. "The difficulties to be overcome in the construction of a railway," says the preface of the work before us, "and the great capital employed in overcoming them, have given rise to a number of engineering works of the highest class, both as examples of constructive skill and general grandeur of appearance.

It follows, unfortunately, from the nature of the case, that whilst purely architectural structures are placed in open thoroughfares, or places of public resort, the engineering works of a road or railway, stand commonly in some remote district, crossing some secluded valley, or piercing some barren hill. The traveller, indeed, upon a common road, is almost always able, from his comparatively slow progress and from the turnings and windings of the way, to obtain a tolerable view of any great work along its courses; but the straightness of the railway, and the rapidity of the motion upon it, entirely shut out its far greater and more numerous works, and thus some of the most magnificent structures in the kingdom, though crossed daily by thousands, are actually seen by few."

The present publication is intended, in some degree, to supply this defect with regard to the Great Western Railway. It contains fifty illustrations of large size, beautifully drawn on stone, some remarks on the application of certain general principles to railway conveyance, a description of the line, notice of the geology, and an account of the general antiquities. The details of the more curious churches and other specimens of ecclesiastical architecture, are described in an appendix.

The illustrations comprise the various stations, viaducts, bridges, and tunnels, with views of the principal places passed, admirably drawn in tints. The Maidenhead Bridge; the entrance to the Box Tunnel; a view from above the tunnel; some of the views near Bath; entrance to Long Tunnel; and the Bristol station, may be pointed out for special praise. Several plates are devoted to the details of some of the ancient buildings near the line, relative to which the letter-press is fuller than it is in other parts. The appendix says:—"Although it is scarcely worth while to notice all the churches which the railway passes, yet it is surprising how very few there are in which do not occur some remains, interesting either from their great antiquity or their architectural beauty, or from their being indications of customs and religious ceremonies, in many cases peculiar to the Anglican church, and now swept away altogether.

There is also another reason why the details of these ancient structures should be worth attention. Their architects, almost always ecclesiastics, worked by certain rules of construction, to which they rigidly adhered, and which has given to their contemporary works all over the country a peculiar stamp of unity. In the details of their ornaments, indeed, they gave free license to an exuberant fancy; but in general character and disposition, no less than in the proportions and arrangements of the different parts of the whole building, their works are so uniform as at once to mark, to an accustomed eye, the date of their erection within a very few years. It is curious, also, to observe how completely this unity of style is preserved, without producing the least tendency to sameness; and, indeed, in buildings at first sight totally dissimilar, each front, each tower, each window, or each doorway, is so marked, as to be recognised at a glance as belonging to a particular date or style, but so varied in its details and ornaments, as that each in turn draws the attention of the spectator with a feeling, not of sameness, but of novelty and delight."

The book is beautifully printed, on excellent paper, and is altogether a fine work of its class. Next week we shall avail ourselves of some of the architectural information it contains, for the benefit of our readers.

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